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| 09/993,331 | 11/06/2001 | Erik M. Geidl | 2860 | 5686 |

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EXAMINER

VO, HUYEN X

ART UNIT PAPER NUMBER

2626

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/993,331 | Applicant(s) GEIDL ET AL. | |
| | Examiner Huyen X. Vo | Art Unit 2626 | |

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/6/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/3/2006 have been fully considered but they are not persuasive. Applicant argues to traverse the prior art rejections based on arguments regarding Kang fails to disclose how handwriting or speech is recognized in the first place or the manner of recognition is not relied upon context-related information or user bias data. Applicant also argues, "using data analysis on text to identify a record type for a database record is of no use in recognizing natural input data into text" (*third paragraph on page 14 of the Remarks section*). Examiner respectfully disagrees. Kang fully anticipates every feature of the based claims in that speech recognition or handwriting recognition is only a front subsystem. They are traditionally known to convert speech/handwriting into textual representation for further processing. Textual representation converted from speech/handwriting is still not readily understood by subsequent systems or subsystems. And Kang's system is directed to analyzing the converted textual representation to determine which portion of the converted textual presentation belongs to which record field by using rules of the database (*referring to claim rejections or reference*). Although applicant argues that the analysis of text to identify a record type is not the same as recognizing speech/handwriting, in fact, textual data is a direct result of the speech recognition or handwriting recognition process. Speech or handwriting input must first be converted to textual data before determining record type. Examiner is not aware of any direct analysis of record type by examining input speech data directly as argued by applicant (*last 2 lines in the second paragraph*

on page 14 of the Remarks section). Furthermore, independent claims fail to clearly indicate that analyses must be performed on the natural input data. Rather, the claims only indicate, "determining, external to the executing program, a context of the input field" (*independent claims*).

2. Applicant also argues that Kang cannot be construed to teach locating recognition biasing information based on determined context fields. However, biasing information can be interpreted as rules stored in database. These rules together with the converted textual representation are used to determine record type/field.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kang et al. (US Patent No. 6741994).

5. Regarding claims 1 and 14, Kang et al. disclose that in a computing device, a computer-implemented method and computer-readable medium for recognizing natural human input, the method comprising: receiving, at a system component, natural input

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data directed to a field of an executing program (*element 304 in figure 3*), wherein the natural input data comprises an input other than textual input (*col. 9, lines 26-30*); determining, external to the executing program, a context of the field (*col. 7, ln. 42 to col. 8, ln. 67, identifying which record field the data belongs to*); locating biasing information based on the context of the field (*col. 8, ln. 3 to col. 9, ln. 21*); and providing a recognition result to the executing program, the recognition result biased by the biasing information and comprising at least one computer code corresponding to recognition of the natural input (*col. 6, ln. 36 to col. 7, ln. 31 or referring to figure 5*).

6. Regarding claim 15, Kang et al. disclose that in a computing device having an executable program, a system comprising: a human input recognition engine configured to convert natural input data to recognition results, wherein the natural input data comprises an input other than textual input (*col. 9, lines 26-30*), each recognition result comprising at least one computer code (*figures 4-5 or the operation of figure 3*); a field determination mechanism that determines field types in fields of executable programs (*col. 7, ln. 42 to col. 8, ln. 67, identifying which record field the data belongs to*); at least one database that maintains biasing information for a plurality of field types (*figure 7 or col. 8, ln. 45 to col. 9, ln. 21, biasing information is the rules used to determine which record field a particular line of data belongs to*), and an input system configured to: 1) receive natural input data directed to the field (*information on figure 4*); 2) communicate with the field determination mechanism to obtain the field type of the field to which the natural input data is directed (*Organize Data 310 in figure 3, Organized Data processes*

and assigns received data in appropriate record fields); 3) obtain biasing information from the database that corresponds to the field type (figure 7 or col. 8, ln. 45 to col. 9, ln. 21, biasing information is the rules used to determine which record field a particular line of data belongs to); 4) communicate the natural input data and the biasing information to the recognition engine and receive the recognition result therefrom (col. 8, ln. 45 to col. 9, ln. 21, the recognizer uses a set of rules to determine which record field the data belongs to); and 5) provide to the executing program at least one computer code corresponding to the recognition result received from the recognition engine (information displayed in figure 5).

7. Regarding claim 30, Kang et al. disclose that in a computing device, a system comprising: a field determination mechanism that determines a field type in an executable program and provides a factoid associated therewith (*col. 7, ln. 42 to col. 8, ln. 67, a set of rules is used to identify which record field the data belongs to); a database of biasing information including sets of user bias data corresponding to factoids (col. 10, ln. 4-30, words pertaining to addresses are stored in the dictionary); an input system configured to receive natural input data (element 402 in figure 4), to obtain a factoid from the field determination mechanism (col. 8, ln. 45-67, the application program use rules to determine data field for the received data), and to obtain user bias data corresponding to the factoid (col. 10, ln. 4-30 and col. 8, ln. 45-67, words/rules pertaining to addresses are used to determine if the input belongs to the address field), wherein the natural input data comprises an input other than textual input (col. 9, lines*

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26-30); a human input recognizer that converts natural input data to computer codes (*the operation of figure 3 takes place in a computer system*), the recognizer configured to receive the factoid, the user bias data and the natural input data from the input system and to provide a recognition result comprising a set of at least one computer code to the input system based on the natural input data, the factoid and the user bias data (*col. 8, ln. 3 to col. 9, ln. 20 and referring to figures 5-7 for analysis and display*); and the input system returning data to the executable program that corresponds to the recognition result (*figures 2-3, the input system accepts input data and passes it to the executing program to analyze, process, and store the input data in the database*).

8. Regarding claims 2 and 5, Kang et al. further disclose a method of claim 1 wherein the biasing information comprises a factoid including at least one validation rule (*col. 8, ln. 45-67*), and wherein the biasing information comprises a set of user bias data (*col. 9, ln. 27-40 or col. 10, ln. 4-30*).

9. Regarding claims 3-4, Kang et al. further disclose a method of claim 2 wherein the factoid is developed based on communicating with the executing program (*figures 6-7, received input is analyzed by the application program and a set of tokens are derived*), and wherein providing a recognition result to the executing program includes providing the factoid to a recognition engine (*col. 7, ln. 32 to col. 8, ln. 67, the application program uses rules to determine which record field the received data belongs to*).

10. Regarding claims 6-8, Kang et al. further disclose a method of claim 5 further comprising, maintaining the set of user bias data in a user bias database (*stored keywords pertaining to addresses are uses as rules for the address field*), and retrieving the set of user bias data from the database by querying the database with a key that corresponds to the field (*col. 8, ln. 1-45, the stored rules/words pertaining to addresses are compared with the received input to determine if the received data belongs to the address field*), harvesting the user bias data from at least one data store accessible to the computing device (*col. 10, ln. 4-30, stored in dictionary*), and providing the set of user bias data to a recognition engine (*col. 8, ln. 45-6, rules or stored keywords are used by the recognizer to determine if the received data belongs to the address field*).

11. Regarding claim 9, Kang et al. further disclose a method of claim 1 wherein the biasing information comprises a factoid including at least one validation rule (*col. 8, ln. 45-67*) and a set of user bias data (*col. 10, ln. 4-30, words pertaining to addresses*), and wherein providing a recognition result to the executing program includes providing the factoid and the set of user bias data to a recognition engine (*col. 8, ln. 45-67, the recognizer uses a set of rules to determine which record field the data belongs to*).

12. Regarding claims 10-11, Kang et al. further disclose a method of claim 1 wherein determining the context of the field includes generating a field signature (*element 502 in figure 5*), and wherein the field corresponds to a window (*each of the record field in*

element 502 in figure 5 represent a window of field), and wherein generating a field signature includes acquiring window attribute data (col. 8, ln. 45 to col. 9, ln. 22, assigning data to the identified fields, wherein each item in element 502 in figure 5 is represented by attribute value).

13. Regarding claims 12-13 and 18, Kang et al. further disclose a method and system of claims 1 and 15, wherein determining the context of the field includes communicating with the executing program (*col. 5, ln. 1-67*) and wherein the natural input data comprises speech or handwriting data (*col. 9, ln. 27-40*).

14. Regarding claims 16-17, Kang et al. further disclose a system of claim 15 wherein the field determination mechanism includes a field signature engine that generates a field signature corresponding to the field type based on characteristics of the field (*element 502 in figure 5 or referring to col. 6, ln. 50-55*), and wherein the characteristics of the field include text displayed proximate the field (*information displayed in figure 5*).

15. Regarding claim 19, Kang et al. further disclose a system of claim 15 wherein the at least one database of biasing information comprises a database of factoids (*col. 8, ln. 45-67, biasing information or rules are inherently stored within the system for use in analyzing the received input*), and wherein the input system communicates the biasing information including a factoid having at least one associated validation rule to the

recognition engine (*col. 8, ln. 45-67, a set of rules are used to determine if the input belongs to a particular record field*).

16. Regarding claim 20, Kang et al. further disclose a system of claim 19 wherein the field determination mechanism includes a field signature engine that generates a field signature corresponding to the field type based on characteristics of the field (*items of element 502 in figure 5*), and wherein each of the factoids in the database are keyed by an index corresponding to the field signature (*col. 10, ln. 3-30, words pertaining to addresses are used as rule in determining if the input belongs to the address field*).

17. Regarding claim 21, Kang et al. further disclose a system of claim 15 wherein the at least one database of biasing information comprises a database of sets of user bias data (*col. 10, ln. 3-30, words pertaining to addresses used as rules in determining if the input belongs to the address field are considered user bias data*), and wherein the input system communicates the biasing information including a set of user bias data to the recognition engine (*col. 8, ln. 45-67, the recognizer uses rules analyze the input*).

18. Regarding claims 22-23, Kang et al. further disclose a system of claim 21, wherein the user bias data set communicated to the recognition engine is retrieved from the database of sets of user bias data based on the field type determined by the field determination mechanism (*col. 8, ln. 45-67 and col. 10, ln. 3-30*), and wherein the

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database is securely maintained on the computing device (*system of figure 2, databases and rules are stored within this computer system*).

19. Regarding claims 24-26, Kang et al. further disclose a system of claim 21 further comprising a data-harvesting engine that obtains at least some of the user bias data from at least one data store accessible to the computing device (*col. 8, ln. 45-67 and col. 10, ln. 3-30, words/rules pertaining to addresses are used to determine if the received data belongs to the address field*), and wherein the database of sets of user bias data includes at least some data that was not harvested by the harvesting engine (*col. 10, ln. 3-30, inherently the dictionary would also include words/rules pertaining to record fields other than the address field*), and wherein the data harvesting engine operates as a background process (*figure 2, rules are supplied to the recognizer application only when needed is referred a background process*).

20. Regarding claims 27-29, Kang et al. further disclose a system of claim 15 wherein the at least one database of biasing information comprises a first database of factoids (*elements 200-206 in figure 2, each uses a different set of rules*) and a second database of sets of user bias data (*col. 10, ln. 3-30, a dictionary*), and wherein the input system communicates the biasing information including a factoid and a set of user bias data to the recognition engine (*col. 8, ln. 45-67*), wherein the factoid and the user bias data are retrieved from their respective databases based on the field type (*elements 200-206, each uses their own rules*), and wherein the factoid includes information

corresponding to at least one criterion with which the recognition result should comply *(referring to the table in col. 7)*.

21. Regarding claims 31-32, Kang et al. further disclose a system of claim 30 wherein the field determination mechanism comprises a field signature engine that generates a field signature for the field type and a field-mapping database that provides the factoid based on the field signature *(items of elements 502 in figure 5 are generated and mapped to the received input)*, and wherein the factoid includes information corresponding to at least one criterion with which the recognition result should comply *(referring to the table in col. 7)*.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HXV

7/11/2006


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SUPERVISORY PATENT EXAMINER